ABSTRACT

A porous sintered compact of titanium oxide of the present invention has a porosity of 20 to 65% and a hardness of 60 (HV) or higher, or has a porosity of 20 to 65%, a specific surface area of 0.1 to 5.0 m^2/cm^3, a volume ratio of pores with 0.3 to 100μm diameter to be 10% or higher to the total pore volume and a hardness of 60 (HV) or higher. Using this porous sintered compact as an electrolytic raw material in the method in which titanium oxide is reduced by electrolysis with an electrolyte composed of a molten salt enables efficiently obtaining metallic titanium. The electrolytic process using a molten salt is attracting attention as a process capable of directly obtaining metallic titanium from titanium oxide with lower cost than in conventional processes, and the employment of the above porous sintered compact would promote its realization remarkably.